

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Peter G. HARTWELL

Confirmation No.: 9192

Application No.: 09/854,599

Examiner: K.I. Tamai

Filing Date: May 15, 2001

Group Art Unit: 2834

Title: USE OF STANDOFFS TO PROTECT ATOMIC RESOLUTION STORAGE MOVEMENT FOR OUT-OF-PLANE MOTION

COMMISSIONER FOR PATENTS
Washington, D.C. 20231

TRANSMITTAL LETTER FOR RESPONSE/AMENDMENT

Sir:

Transmitted herewith is/are the following in the above-identified application:

- (X) Response/Amendment () Petition to extend time to respond
() New fee as calculated below () Supplemental Declaration
(X) No additional fee (Address envelope to "Box Non-Fee Amendments")
() Other: _____ (fee \$ _____)

CLAIMS AS AMENDED BY OTHER THAN A SMALL ENTITY						
(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT	(3) NUMBER EXTRA	(4) HIGHEST NUMBER PREVIOUSLY PAID FOR	(5) PRESENT EXTRA	(6) RATE	(7) ADDITIONAL FEES
TOTAL CLAIMS	20	MINUS	20	= 0	X \$18	\$ 0
INDEP. CLAIMS	3	MINUS	3	= 0	X \$84	\$ 0
[] FIRST PRESENTATION OF A MULTIPLE DEPENDENT CLAIM					+ \$280	\$ 0
EXTENSION FEE	1ST MONTH \$110.00	2ND MONTH \$410.00	3RD MONTH \$930.00	4TH MONTH \$1450.00		\$ 0
OTHER FEES						\$
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT						\$ 0

Charge \$ 0 to Deposit Account 08-2025. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231.

Date of Deposit:

Typed Name:

Signature: _____

Respectfully submitted,

Peter G. HARTWELL

By

John K. Harrop

Attorney/Agent for Applicant(s)

Reg. No. 41,817

Date: 1/27/2003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Peter G. HARTWELL

Examiner: K. I. Tamai

Serial No.: 09/854,599

Art Unit: 2834

Filed: May 15, 2001

Confirmation No.: 9192

For: USE OF STANDOFFS TO PROTECT ATOMIC RESOLUTION STORAGE
MOVER FOR OUT-OF-PLANE MOTION

Box Non-Fee Amendment

Commissioner of Patents
Washington, D.C. 20231

REQUEST FOR RECONSIDERATION

Sir:

This communication responds to an Office Action mailed October 25, 2002. Claims 1-11 are pending. Claims 11-20 are withdrawn from consideration. Reconsideration and allowance of the claims are respectfully requested.

Claim Rejections

Claims 1-3, 5, 6, and 8-11 are rejected under 35 U.S.C. § 102(b) over Japanese Patent No. 08-051786 to Narita et al. ("Narita"). This rejection is respectfully traversed.

For anticipation under 35 U.S.C. § 102(b), the reference "must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present" (MPEP §706.02, Rejection on Prior Art).

The present invention claims the use of standoffs in a micro-actuator to prevent out-of-plane motion of a micro-mover. The micro-actuator includes a stator wafer having one or more stator electrodes protruding from a surface of the stator wafer, a micro-mover having one or more actuator electrodes protruding from a surface of the micro mover and facing the stator electrodes on the surface of the stator wafer, and at least one bumper positioned between the stator wafer and the micro-mover. The micro-mover is positioned in parallel to the stator wafer and is capable of horizontal movement within a limited range in the plane that is parallel to the stator wafer. The out-of-plane movement of the micro-mover, which would result in a contact between a stator electrode and an actuator electrode, is prevented by the bumper(s) between the stator wafer and the micro-mover.

Narita generally describes an electrostatic motor having an armature and a stator with grooves etched on their respective surface. The armature electrodes and stator electrodes are

placed at the bottom of the grooves which are filled with lubricating oil so that abrasion resistance between armature and stator is minimized and direct contact between the armature electrodes and the stator electrodes is prevented.

As recited in claim 1 of the instant application, the stator and the micro-mover have electrodes **protruding** from their respective surfaces. The electrodes disclosed in Narita, however, are **receding** electrodes located at the bottom of the grooves on the surface of the armature and the stator. Narita does not teach nor suggest protruding electrodes. Therefore, applicant respectfully submits that Narita does not anticipate independent claim 1.

Furthermore, by placing the electrodes at the bottom of the grooves on the surface of the armature and the stator, the Narita design requires multiple grooves on the surface of **both** the armature and the stator. The instant invention, to the contrary, requires only a bumper, or a plurality of bumpers, between the stator wafer and the micro-mover. The bumper(s) may protrude **either** from the surface of the stator wafer (claim 4) **or** from the surface of the micro-mover (claim 5). Therefore, applicant respectfully submits that Narita does not teach or suggest the bumper configuration of the instant invention, as recited in claims 4 and 5. Dependent claims 2-3, 5, 6, and 8-11 are patentable for the reasons provided with respect to claim 1, and because they define additional combinations of features not found in or suggested by the cited reference.

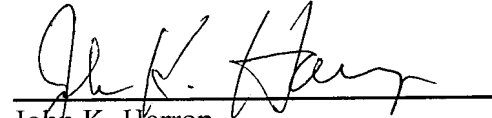
Claims 4 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Narita. The Office Action alleges that Narita teaches every aspect of the invention except the bumpers extending at least twice the distance from the first surface as the electrodes. Applicant respectfully traverses the rejection. First of all, Narita does not teach every aspect of the invention except the height of the bumpers. As discussed earlier, Narita teaches receding electrodes but not protruding electrodes. In fact, Narita describes the disadvantage of protruding electrodes in the prior art (Figures 5 and 6). Therefore, Narita teaches away from the instant invention. For this reason alone, claims 4 and 7 should be patentable over Narita. Moreover, Narita does not teach nor suggest the optimization of bumper height or, more properly in the Narita configuration, the depth of the grooves on the armature and the stator. The Office Action alleges that it would have been obvious to one skilled in the art at the time of the invention to construct the actuator of Narita with the bumpers being twice as higher as the electrodes. However, beyond mere conclusory statements, no prior art reference was cited to support the Office Action's position. The mere allegation that the differences between the claimed subject matter and the prior art are obvious does not create a presumption of unpatentability which forces an applicant to prove conclusively that the

Patent Office is wrong. *In re Soli*, 317 F.2d 941 (CCPA 19623). The ultimate legal conclusion of obviousness must be based on facts or records and subjective opinions are of little weight against contrary evidence. *In re Wagner et al.* 371 F.2d 877 (CCPA 1967). Unlike *In re Aller*, 220 F.2d 454 (CCPA 1955), where the general conditions of the claims are disclosed in the prior art, the general conditions of the instant claims, *i.e.*, the protruding electrodes and the distance between the opposing electrodes, are not disclosed in Narita. Therefore, the Examiner has not met the burden to establish a *prima facie* evidence.

In view of the foregoing remarks, favorable reconsideration of all pending claims is requested. Applicant respectfully submits that this application is in condition for allowance and requests that a notice of allowance be issued. Should the Examiner believe that anything further is required to expedite the prosecution of this application or further clarify the issues, the Examiner is requested to contact Applicant's attorney at the telephone number listed below. Applicant believes no additional fees are due. However, if any additional fees are due, please charge them to Deposit Account 08-2025.

Dated: January 27, 2003

Respectfully submitted,



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